

INC

VAA10911-R.3555.A

作成承認印	配布許可印
	

D1H

VAA10911
(JAPAN/NTSC)

VAA10912
(USA/EN/NTSC)

VAA10913
(EP/PAL)

REPAIR MANUAL

Nikon | NIKON CORPORATION

Tokyo, Japan

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1. Specifications

Type	Single-lens reflex digital camera with interchangeable lenses			
Operating	Temperature: 0 - 40 °C (32 - 104 °F) Humidity: Less than 85% (no condensation)			
Image sensor	23.7 × 15.6 mm, 12-bit RGB CCD with 2.74 million pixels, effective pixel count 2.66 million pixels (2,012 × 1,324 pixels)			
Image size	2,000 × 1,312 pixels			
Sensitivity	200 - 1600 (ISO equivalent) in steps of 1/3, 1/2 or 1 EV.			
Storage	Compression	<ul style="list-style-type: none"> HIGH image quality: uncompressed YCbCr-TIFF (8-bit), RGB-TIFF (8-bit), or RAW data (12-bit); compressed RAW data (12-bit, lossless compression algorithm compresses data approximately 50% - 60%) FINE, NORMAL, or BASIC image quality: JPEG baseline-compliant (approximate compression ratios 1:4, 1:8, 1:16 respectively) 		
	Media	Type I/II CompactFlash cards; microdrives		
Approximate capacity (96 MB)	High/RAW (uncompressed)	23	FINE/L	66
	HIGH/YCbCr-TIFF/L	17	NORMAL/L	132
	HIGH/RGB-TIFF/L	12	BASIC/L	265
Operating modes	S	Single frame, image-preview mode available		
	C	Continuous, approx. 5 fps, max. 40 consecutive shots, capture-preview mode available		
	SH	Self-timer mode; delay can be specified by user		
	PLAY	Playback mode with playback menu		
	PC	PC mode; data-transfer to computer		
White balance	<ul style="list-style-type: none"> Auto (TTL control with 1,005-pixel CCD) 			
	<ul style="list-style-type: none"> Six manual modes with fine tuning 			
	<ul style="list-style-type: none"> Preset 			
Playback	Single-frame playback, thumbnail playback (4 or 9 images), slideshow, histogram, and highlight point display			
Image deletion	Card format, delete all images, delete selected images			
Video output	Can be selected from NTSC or PAL			
External interface	IEEE 1394 (designed for speeds of up to 400 Mbps); RS-232C connection for GPS unit (GPS units not available from Nikon)			

Compatible lenses	Type G or D AF Nikkor	All camera functions supported
	Other type G or D Nikkor	All camera functions except autofocus supported
	Other AF Nikkor	All camera functions except 3D color matrix metering and 3D multi-sensor balanced fill-flash for the D1 series supported
	AI-P Nikkor	All camera functions except 3D color matrix metering, 3D multi-sensor balanced fill-flash for the D1 series, and autofocus supported
	Other	Other lenses can be used in aperture-priority or manual mode with center-weighted or spot metering; electronic range-finder can be used with lenses with a maximum aperture of f/5.6 or faster.
Viewfinder	Type	Optical fixed eye-level pentaprism with diopter adjustment of -3 to +1 DP, equipped with eyepiece shutter
	Eyepoint	22 mm (at -1.0 DP)
	Focusing screen	Type B BriteView clear matte screen Mark III; optional type E screen for D1 series cameras (with grid) can also be used
	Frame coverage	Vertical and horizontal frame coverage approximately 96% of lens
	Magnification	0.8 × with 50-mm lens set to infinity and -1.0 DP
Reflex mirror	Quick-return	
Lens aperture	Instant return with depth-of-field preview	
Autofocus	TTL phase detection by means of Nikon Multi-CAM1300 autofocus module; detection range -1 to 19 EV (ISO 100 at room temperature)	
Lens servo	Instant Single-servo AF (S), Continuous-servo AF (C), manual (M); focus tracking automatically activated according to subject status in single-servo and continuous-servo AF	
Focus area	Focus area can be selected from five focus areas	
AF-area mode	Single-area AF, Dynamic AF (supports closest subject priority)	
Focus lock	Focus can be locked using the AE/AF lock button or, in single-servo AF, by pressing the shutter-release button halfway	

Exposure metering system	TTL full-aperture exposure metering system with three metering modes								
3D color matrix	3D color matrix metering using 1,005-pixel CCD supported when type G or D Nikkor lens is attached; with other lenses, color matrix metering using 1,005-pixel CCD is supported								
Center-weighted	Greatest weight (75% of total) given to a circle in the center of the frame 8 mm in diameter								
Spot	Exposure determined by 4-mm circle in center of frame (approximately 2% of frame); when a CPU Nikkor lens is attached, any of the five focus areas can be used for spot metering								
Exposure range	At ISO 100, room temperature, and with f/1.4 lens: 0 - 20 EV (center-weighted or 3D color matrix metering) or 2 - 20 EV (spot metering)								
Exposure meter coupling	Combined CPU and AI								
Exposure modes	<table> <tr> <td>P</td> <td>Programmed auto with flexible program</td> </tr> <tr> <td>S</td> <td>Shutter-priority auto</td> </tr> <tr> <td>A</td> <td>Aperture-priority auto</td> </tr> <tr> <td>M</td> <td>Manual (exposure adjustable in steps of 1/2 or 1/3 EV)</td> </tr> </table>	P	Programmed auto with flexible program	S	Shutter-priority auto	A	Aperture-priority auto	M	Manual (exposure adjustable in steps of 1/2 or 1/3 EV)
P	Programmed auto with flexible program								
S	Shutter-priority auto								
A	Aperture-priority auto								
M	Manual (exposure adjustable in steps of 1/2 or 1/3 EV)								
Exposure compensation	-5 to +5 EV in increments of 1/3 EV; exposure compensation indicator appears in viewfinder and top control panel								
Auto-exposure lock	Locked at detected value when AE/AF lock button is pressed								
Auto bracketing	2 - 3 exposures compensated in steps of 1/3, 1/2, or 1 EV								
Shutter	Combined electronic (CCD) and mechanical shutter								
Shutter Speed	30-1/16,000sec. (1/3 increments), long time-exposure (bulb)								

Flash	
Sync contact	X-contact only; flash synchronization at speeds of up to 1/500 s
Flash control	<ul style="list-style-type: none"> • Automatic balanced fill-flash controlled by five-segment TTL multi-sensor with single-component IC – 3D multi-sensor balanced fill-flash for D1 series (SB-28DX or SB-50DX with type G or D Nikkor lens) – Multi-sensor balanced fill-flash (SB-28DX or SB-50DX with AI-P Nikkor or Nikkor lens of a type other than type G or D) • Auto-aperture (AA) flash (SB-28DX with CPU Nikkor lens) • Non-TTL auto flash (with SB-28DX, SB-50DX, SB-28, SB-27, SB-22s, and other Speedlights)
Flash sync modes	Front curtain (normal) sync, red-eye reduction, red-eye reduction with slow sync, slow sync, rear curtain
Flash-ready light	Lights when SB-28DX, SB-50DX, SB-28, SB-27, or SB-22s is fully charged; blinks for three seconds after being fired at full output
Accessory shoe	Standard ISO hot-shoe contact with safety lock
Sync terminal	Standard JIS terminal with locking screw
Self-timer	Electronically controlled timer, duration 2-20 seconds
Depth-of-field preview button	Lens aperture stopped down when pressed
Remote control	Remote control via 10-pin remote terminal or IEEE 1394 interface (designed for speeds of up to 400 Mbps)
Monitor	2", 130,000-dot, low-temperature polysilicon TFT LCD with adjustable white LED backlight and brightness adjustment
Power source	EN-4 Ni-MH Battery Pack, 7.2 V DC (can be recharged with optional MH-17, MH-16 or MH-15 Quick Chargers); EH-4 AC adapter (sold separately), 100 - 240 V AC
Tripod socket	1/4" (JIS)
Dimensions (W×H×D)	Approximately 157 × 153 × 85 mm (6.2" × 6.1" × 3.4")
Weight	Approximately 1.1 kg (2.5 lbs) excluding battery

* Unless otherwise stated, all figures are for a camera with a fully-charged battery operated at an ambient temperature of 20°C (68°F).

Most parts of **D1H** are common with those of **D1** and also disassembly and assembly are almost the same as **D1**.

This Repair Manual indicates only the part that is different from **D1**.

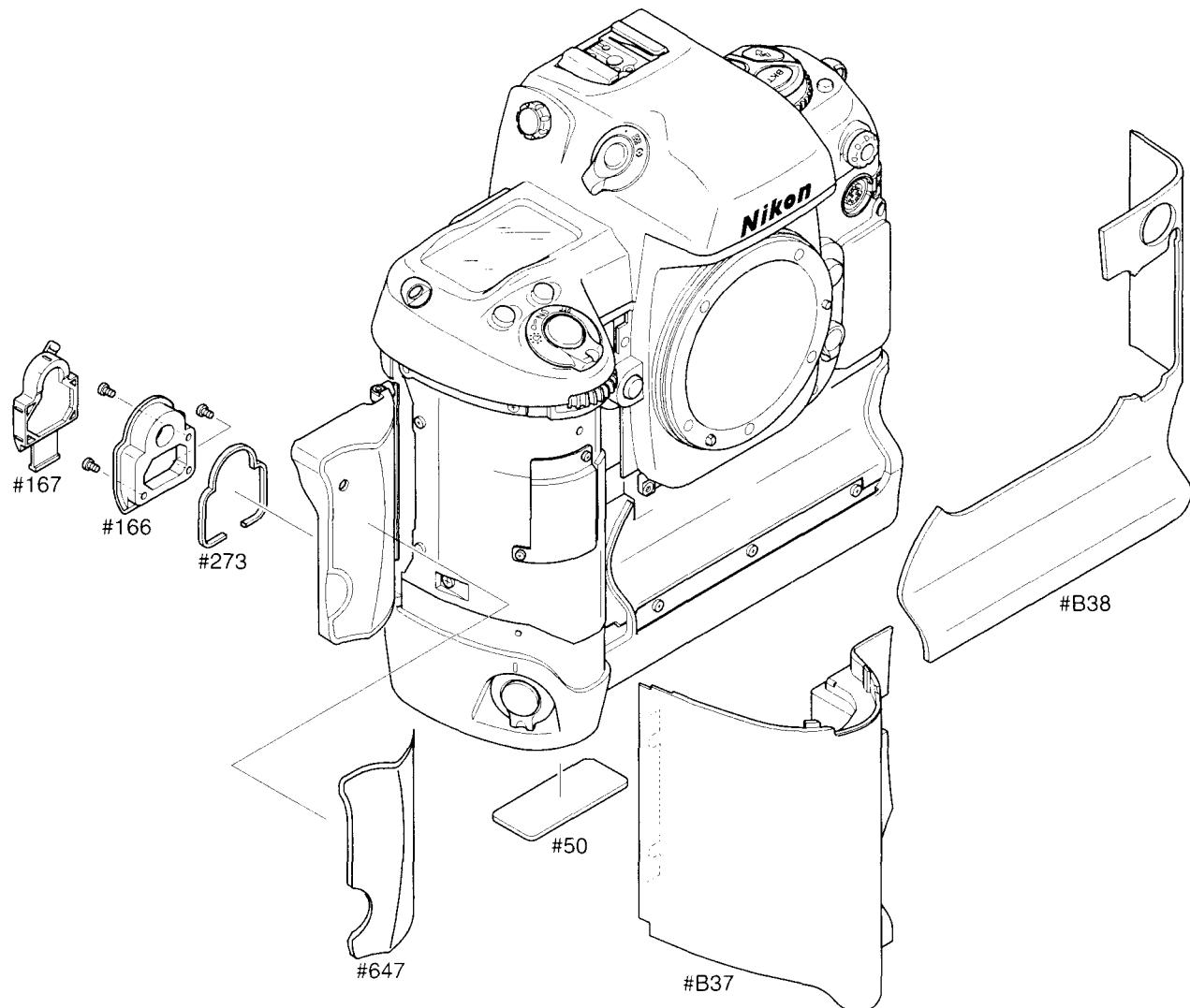
2. CAUTIONS FOR DISASSEMBLY AND ASSEMBLY

- ① In disassembly and assembly, carry out the work by using the conductive mat (J5033) and list straps (J5033-5) to protect the electric parts from static electricity.
- ② The low-pass filter of the image CCD bracket unit is liable to damage. Handle it very carefully.
- ③ When disassembling, remember the processed condition of lead wires and FPC, the setting positions and kinds of screws, etc.
- ④ Before disassembling, remove the batteries or the AC power cord.
- ⑤ Some lead wires are adhered with the adhesive (SC608Z). When assembling, adhere the lead wires with the specified adhesive.
- ⑥ The battery for backup is mounted on the TFT drive PCB. For replacing the battery for backup, accordingly, disassemble the TFT drive PCB as well. Refer to repair Manual of **D1** page A30.

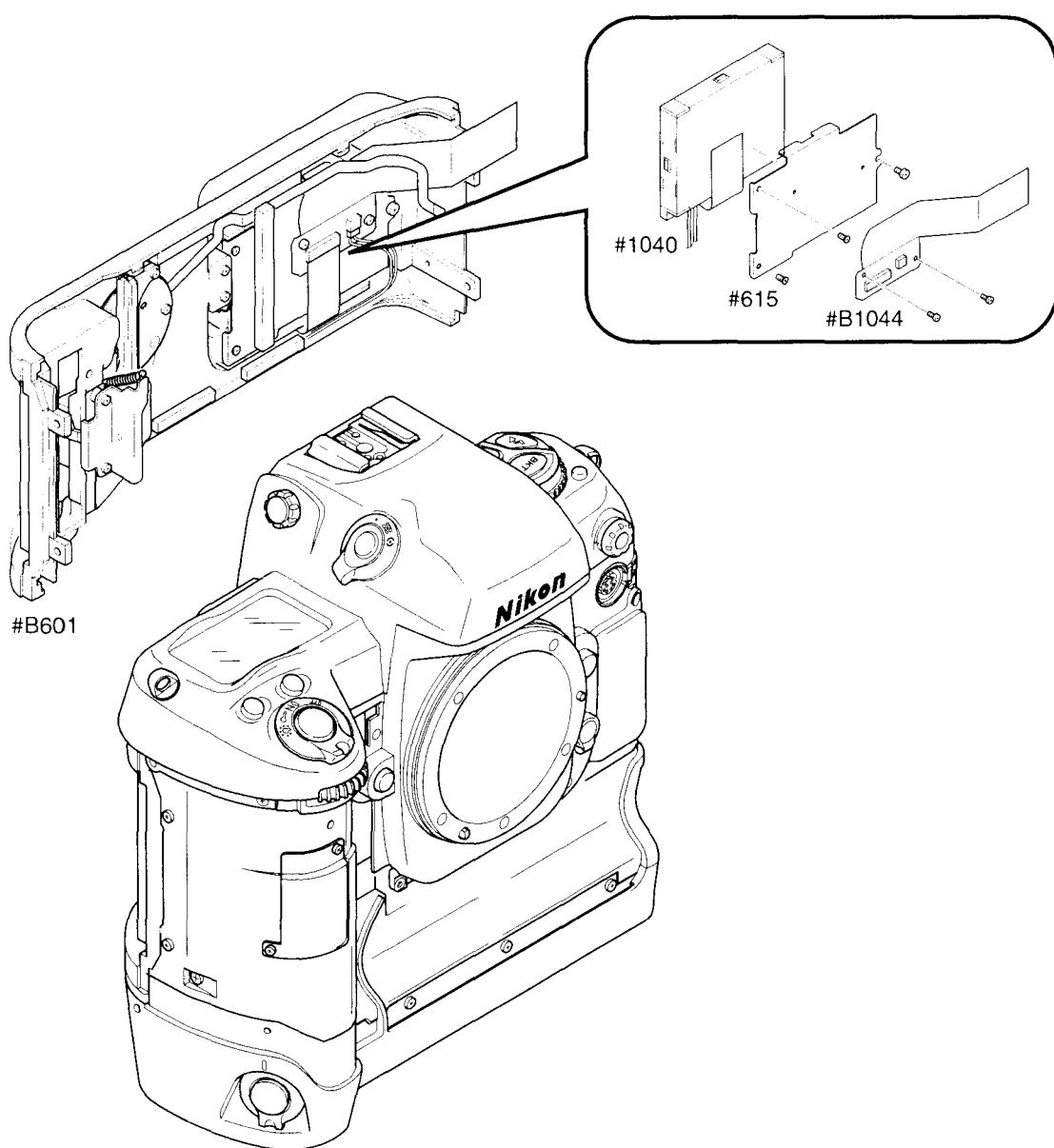
3. Changed parts and changed things from **D1** .

The changed parts, the reasons of changes and notes at disassembly and assembly are mentioned in P2 to P8.

Since there are special parts for **D1H** not only the parts in this manual, for detail, refer to the Parts List.



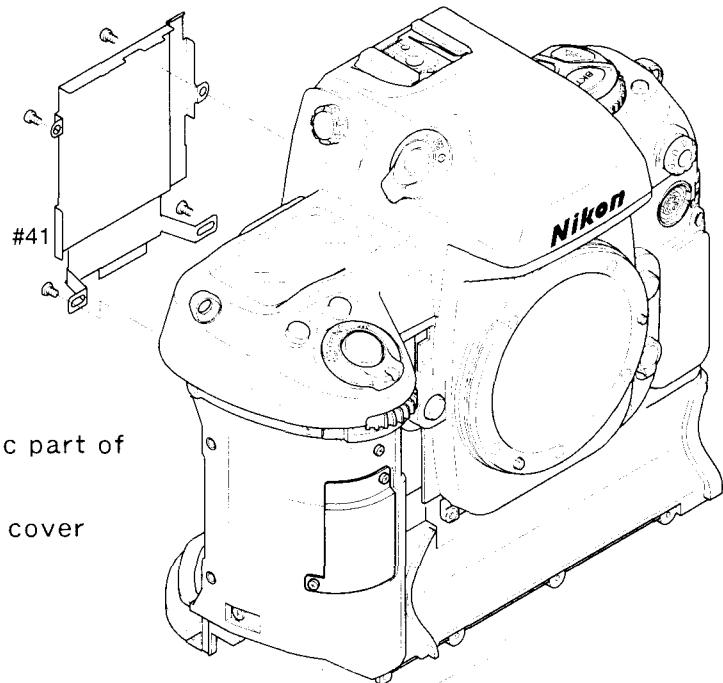
No.	Name	Changed thing
# 167	I/F connector rubber cover	Shape
# 166	I/F connector cover plate	Shape
# 273	Sponge	Along with change of #166
# 647	C/F rubber cover	Quality of the materials of the rubber
# B37	Grip rubber	Quality of the materials of the rubber
# B38	Rewind side rubber	Quality of the materials of the rubber
# 50	Rating plate	Mentioned matter



No.	Name	Changed thing
# 1040	TFT unit	Specification of TFT Back light was changed to white LED type
# 615	TFT retainer	Along with change of #1040
# B1044	Display LCD connection FPC	Along with change of #1040
# B601	Back door unit	Along with change of #1040

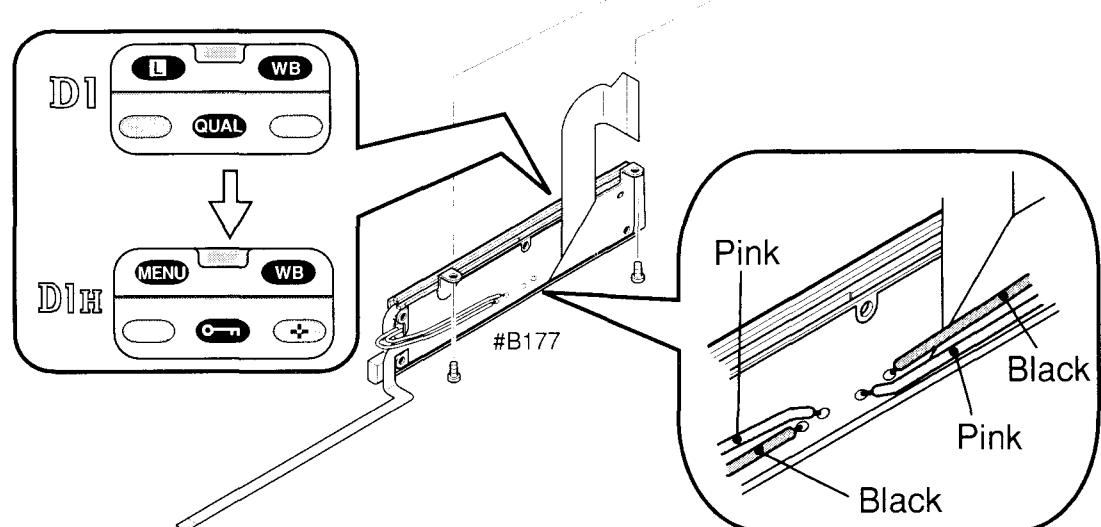
Notes:

The inverter base unit (6S007-175) that was mounted in D1 is not mounted in D1H because of the change of TFT back light type.

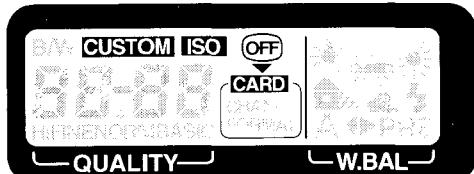


Notes:

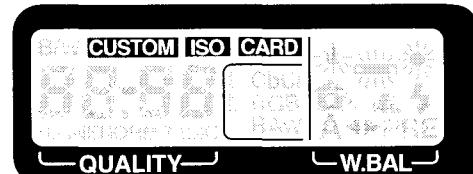
Be careful not to break the electric part of the CCD bracket PCB when attaching/removing the CCD base cover plate (#41).



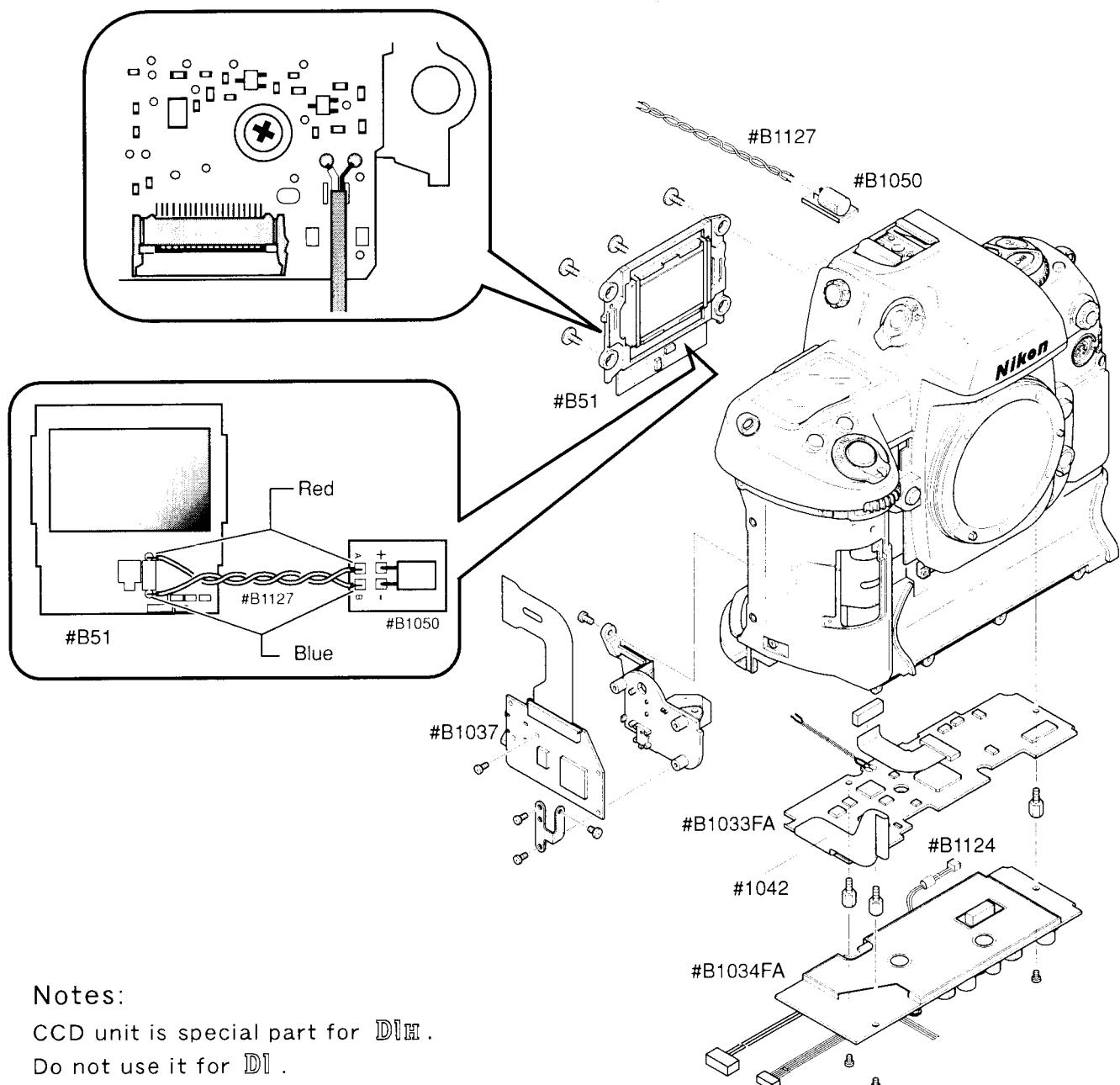
No.	Name	Changed thing
#41	CCD base cover plate	Shape
#B177	Rear cover LCD unit	Position of the solder pattern on FPC Names of the SW button on the back LCD display



D1



D1H

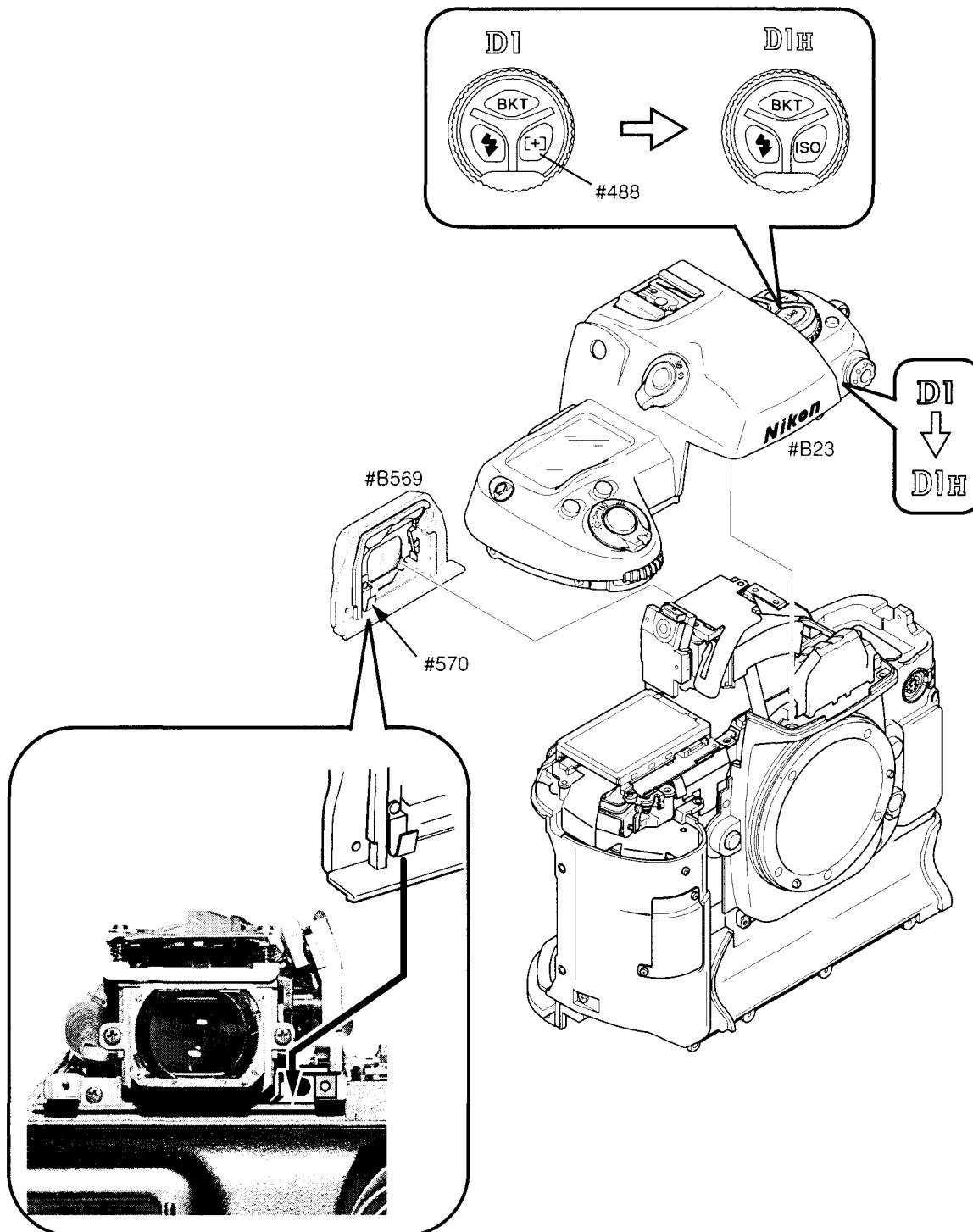


Notes:

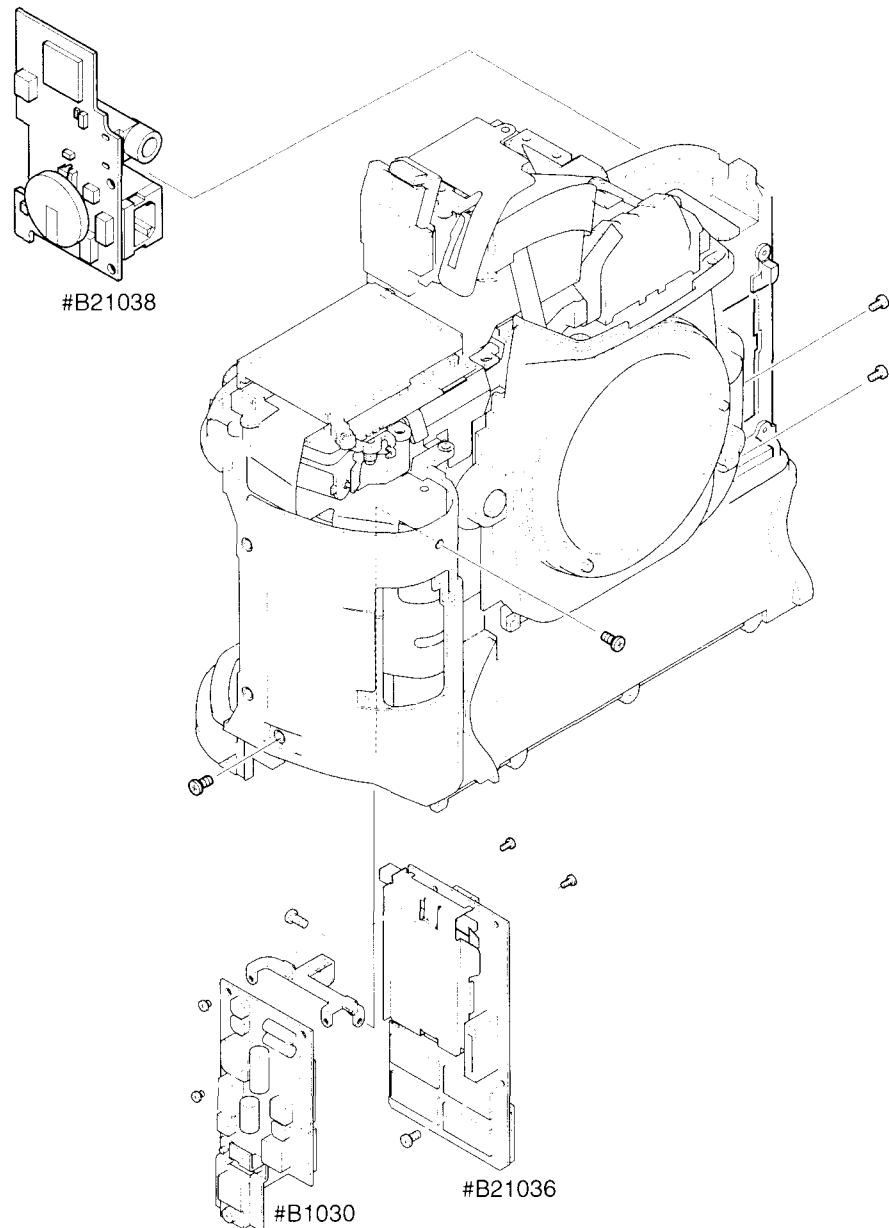
CCD unit is special part for **D1H**.

Do not use it for **D1**.

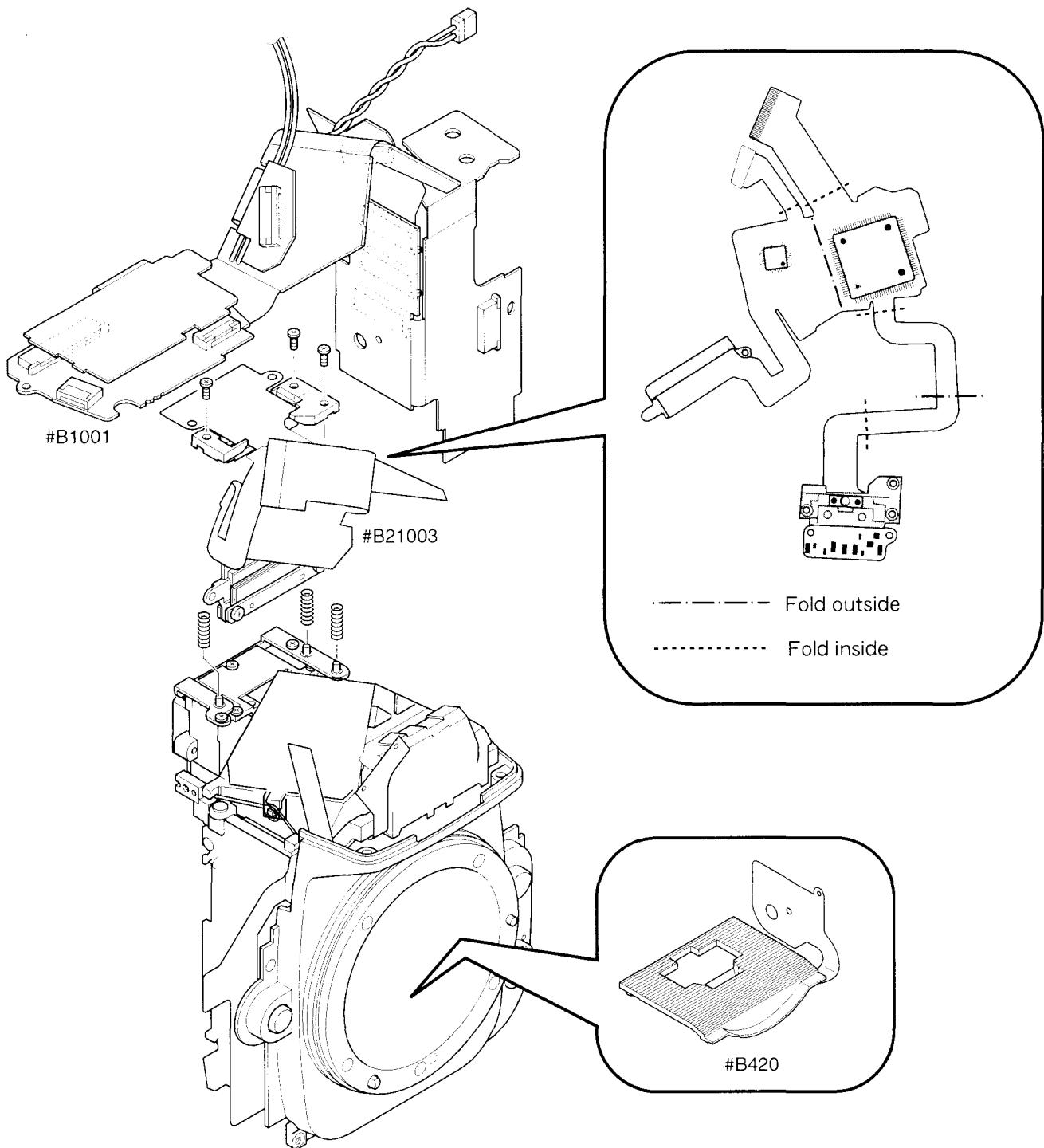
No.	Name	Changed thing
#B51	CCD bracket unit	Total number of CCD pixels
#B1033FA	TG PCB	Along with change of #B51
#B1034FA	CCD power PCB	Along with change of #B51
#B1037	PC I/F	Shape of PCB Internal circuit
#B1050	T1.7 PCB	Addition
#B1127	Lead wires	Along with addition of #B1050
#B1124	Lead wire No.9	Core was added.
#1042	TG connecting FPC	Along with change of #B1033FA



No.	Name	Changed thing
# 488	Button rubber	Name of button
# B23	Top cover unit	By change of #488 Printed name of product
# B569	Eyepiece frame unit	Eyepiece finger (#570) was added.



No.	Name	Changed thing
# B21038	TFT drive PCB	Internal circuit
# B1030	DC/DC PCB	Internal circuit
# B21036	Memory completion PCB	Internal circuit

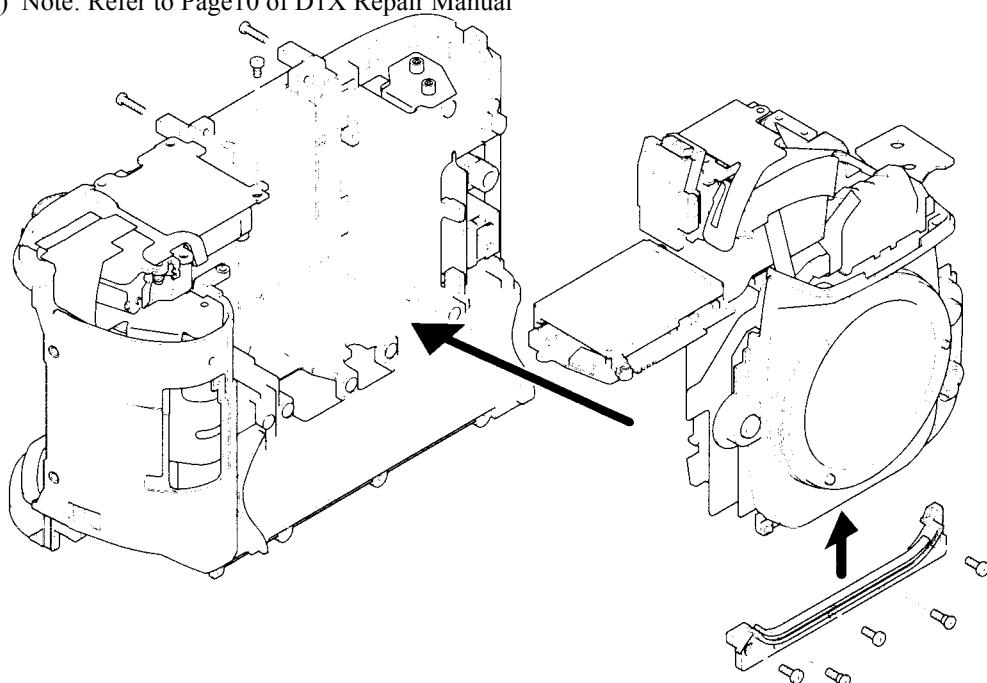


No.	Name	Changed thing
# B1001	Main FPC	Internal circuit
# B21003	Finder metering FPC	Software of FD-MPU
# B420	Mirror box base plate	Lens for SB-TTL

Adjustment for body back

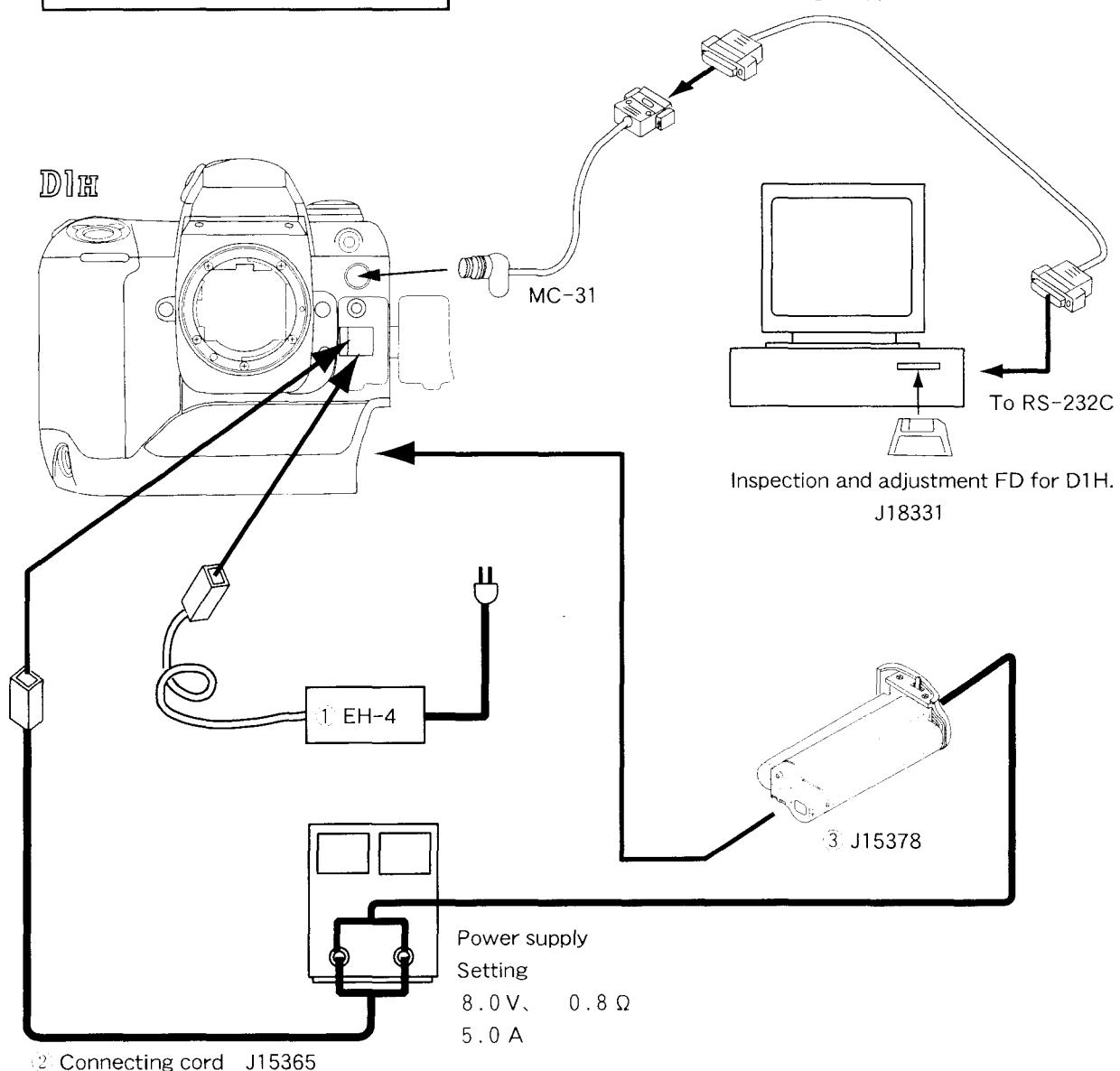
Be sure to perform the inspection/adjustment for body back with the following way after assembling the front body to the rear body.

△ (Addition) Note: Refer to Page10 of D1X Repair Manual



Adjustment through PC for camera body

How to connect with each other



There are ways to supply power at adjustment as follows.

- 1 Use an AC adapter (EH-4)
- 2 Use the connecting code (J15365) and the power supply
- 3 Use the battery check adjustment tool (J15378) and the power supply.

When performing [Battery check inspection/adjustment], supply power with the way 3.

Shooting Image Adjustment

1. Shooting Image Adjustment

1-1. Applicable adjustment

Be sure to perform the shooting image adjustment and TFT adjustment given in the following table when replacing the CCD block or PC board.

	Shooting Image Adjustments		
	OB Adjustment VSUB level Adjustment Sensitivity adjustment OB inspection CCD GbGr level compensation Color sensitivity ratio adjustment	AWB Adjustment	Flash up
CCD block	* Assembly already adjusted	○	×
Compressed recording board	×	×	○
Main FPC	×	○	×
Finder Metering FPC	×	×	×

	TFT Adjustments	
	VCOM adjustment Picture angle adjustment	Flash up
Compressed recording board	×	○
TFT drive board	○	×
TFT LCD	○	×

1-2. Materials to be used

- PC running DOS/V
- Shooting image adjustment software (Japanese version: J65041A, English version: J65041B)
- IEEE1394 board (Board that supports OHCI)
- AC adapter (Product diversion: EH-4)
- IEEE1394 cable (SC-D1 or cable supplied with IEEE1394 board)
- 10-pin cable (Product diversion: MC-31 + RS-232C cable)
- Color viewer (Kyouritsu's J63070 or DNP's CCV51F/V)
- Luminance meter (BM-3000, J63068 or BM-300)
- Colorbar chart (DNP's standard colorbar chart: J63053)
- Tripod
- Lens for shooting image adjustment (Fixed aperture conversion type: J61185)
- ND3 filter (J63065)
- Filter holder (J63066)
- D1x reference body

1-3. Adjustment software

1-3-1. System requirements

- OS Windows 98 Second Edition Japanese or English version
- CPU Pentium II, 400 MHz or faster
- Memory 256MB or more
- Floppy disk drive x one or more
- Usable slot PCI x one or more
- COM port x one or more
- IEEE1394 x one or more (Use IEEE1394 board that supports OHCI)

1-3-2. How to install Adjustment software

Shooting image adjustment software is made up of the following four files. Prepare a folder for storing these four files on the PC and copy them into the folder created to install.

File configuration ServiceImage. EXE
 D1_Drv. DLL
 NkD1394p. DLL
 AdjustStd. TXT

1-4. Preparation for the adjustment

- Perform the adjustment in a darkroom.
- (If it is not in a darkroom, brightness around the tool should be 400 lx or less. Position the viewer so that the external light might not enter the viewer luminance panel.)
- Set the temperature in a room $23 \pm 3^\circ\text{C}$
- Make the viewer light for 30 minutes or longer before adjustment to stabilize the brightness.
- (When replacing a fluorescence tube, perform the 200 hours aging.)
- Set the brightness of the viewer to $LV13 \pm 0.05$
- Connect a PC and a camera by using a IEEE1394 cable and 10-pin cable (MC-31 + RS232C cable).
(Connect the 10-pin cable to COM1 port.)
- Supply the electric power to the camera from the AC adapter.

1-5. How to use the adjustment software

1-5-1. Start the software

The software can be started by executing the "ServiceImage.exe" file.

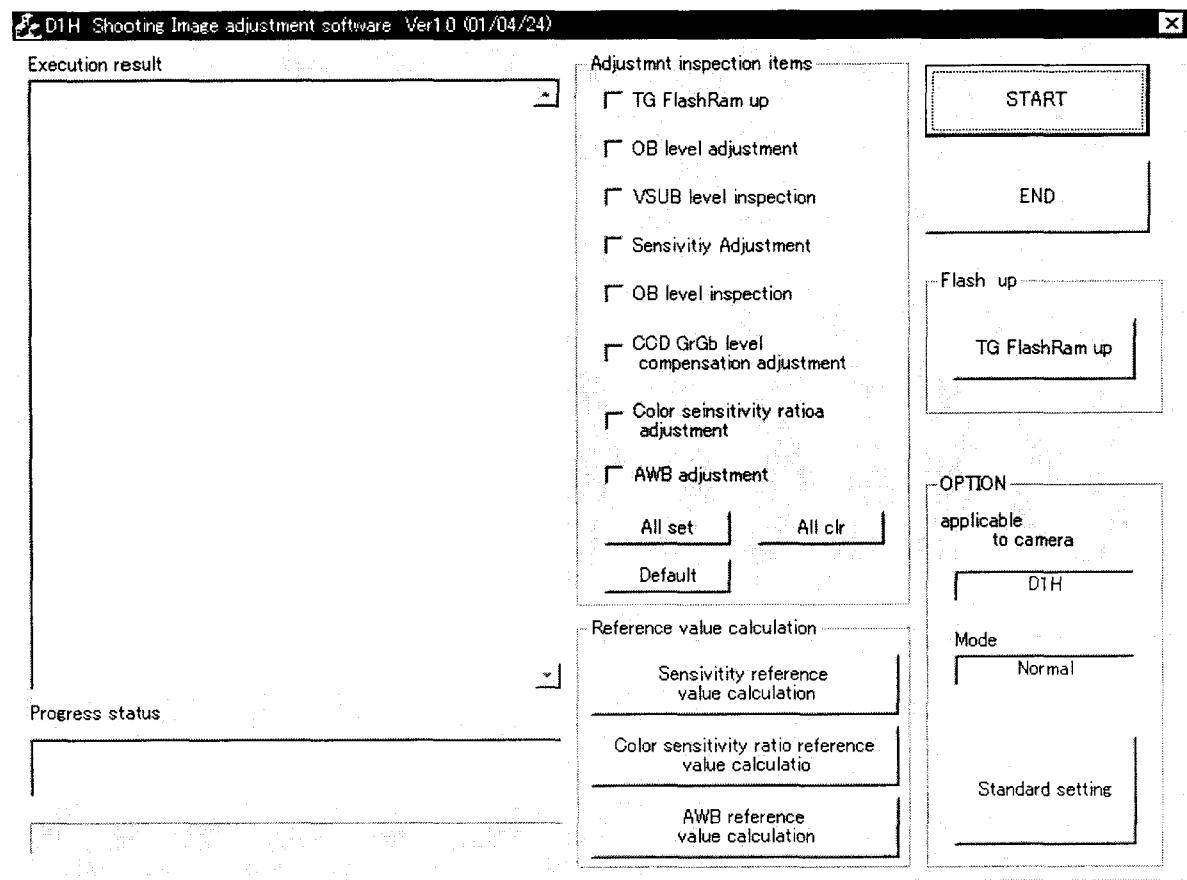


Figure 1: Shooting image adjustment software Main window

1-5-2. Initial settings

Obtain the reference values by using a Dlx reference body before adjustment.

(This procedure is necessary to lessen unevenness of the adjustment accuracy due to the difference of the color temperature per viewer.)

- Sensitivity reference value
- Color sensitivity ratio reference value
- AWB reference value

[How to obtain the reference value]

- (1) Click the "Sensitivity reference value calculation" button in the main window.
- (2) Perform the measurement following the indications displayed.
- (3) If the numerical value is shown, click the "OK" button to make the reference value effective.
(When invalidating the value, click the cancel bottom to finish.)
- (4) Click the "Standard setting" button to start the Dialog (Figure 2).
- (5) Click the "SAVE" button to save the setting value in the file.
- (6) Obtain the Color sensitivity ratio reference value and AWB reference value and save them in the standard setting in the same way.

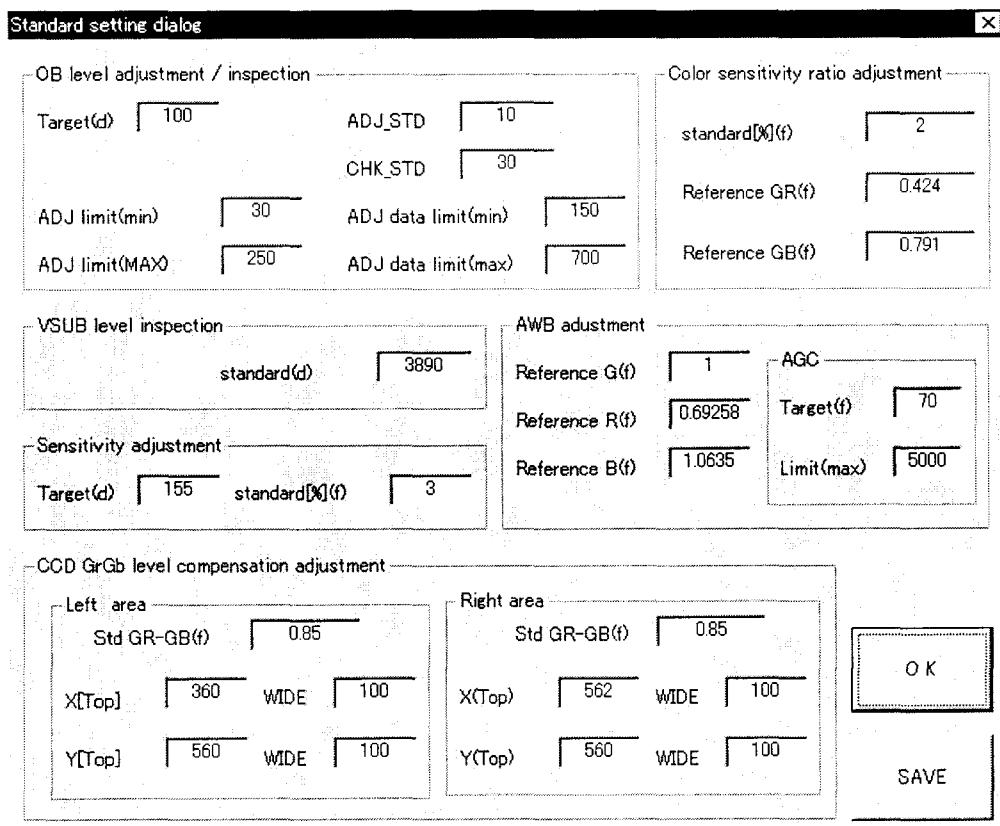


Figure 2 : Standard setting dialog

1-5-3. How to adjust

Choose an item you desire. *Notes 1

- FlashRam up (Update only TG EEPROM) *Notes 2
- OB level adjustment
- VSUB level inspection
- Sensitivity adjustment
- OB level inspection
- CCD GbGr level compensation
- Color sensitivity ratio adjustment
- AWB adjustment (White balance adjustment)

* Notes 1) The item that cannot be adjusted individually is selected automatically at the same time.

Combination of the adjustment items

OB adjustment (Sensitivity adjustment and OB level inspection)

Sensitivity adjustment (OB level inspection)

CCD GbGr level compensation (Color sensitivity ratio adjustment)

* Notes 2) Do not perform FlashRam Up of TFT EEPROM

“TG FlashRam Up” button is a function that is the same as when selecting TG FlashRam Up in Adjustment inspection items and clicking “START” button.

[How to adjust]

- (1) Select the adjustment item and click “START” button.
- (2) Perform the adjustment following the indications shown on the screen.
- (3) The results are shown. If it is normal, “OK” is shown. IF it is not normal, “NG” is shown.
- (4) Take out the cables from the camera and finish the adjustment.

2. TFT adjustment

2-1. Applicable adjustment

1. Refer to the shooting image adjustment P11

2-2. Materials to be used

- PC running DOS/V
- Shooting image adjustment software (Japanese version: J65041A, English version: J65041B)
- AC adapter (Product diversion: EH-4)
- Serial cable (Product diversion: SC-EW2 or cable for E950/700)
- Luminance meter (BM-3000, J63068 or BM-300)

2-3. Adjustment software

2-3-1. System requirements

- OS Windows 98, 98SE, ME, 2000 Japanese version or English version
- CPU Pentium 200MHz or faster
- Memory 64MB or more
- Floppy disk drive x one or more
- COM port x one or more

2-3-2. How to install

Shooting image adjustment software is made up of the following two files. Prepare a folder for storing these two files on the PC and copy them into the folder created to install.

File configuration	setup.exe
	SETUP.LST
	D1X&H_1.CAB
	D1X&H_2.CAB

Then, execute the “setup.exe” to start the installer.

After starting the installer, operate it following the indications of the installer.

2-4. Preparation for the adjustment

- Connect a PC and a camera by using a serial cable.
- Supply the electric power to the camera from the AC adapter.

2-5. How to use the adjustment software

2-5-1. Start the software

This software can be started by executing “D1X&H_TFTAdjustment” file from the Start Menu of Windows.

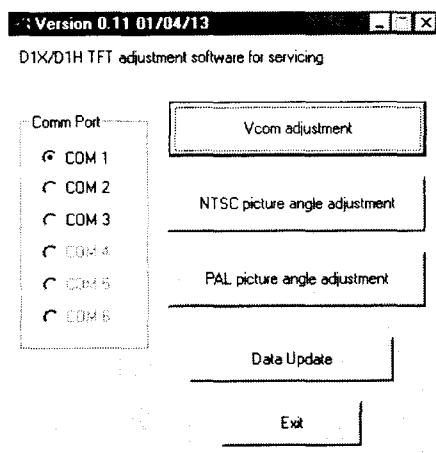


Figure 3: Screen when starting the TFT adjustment software

2-5-2 . How to adjust

Choose an item you desire.

- Vcom adjustment
- NTSC picture angle adjustment
- PAL picture angle adjustment
- Flash Up (Only TFT_EEPROM)

[How to adjust]

◇Vcom adjustment

Apply the sensor of the luminance meter to the LCD monitor of the camera and read the value. Find a setting value that minimizes the luminance and write that value in the camera as the adjustment value.

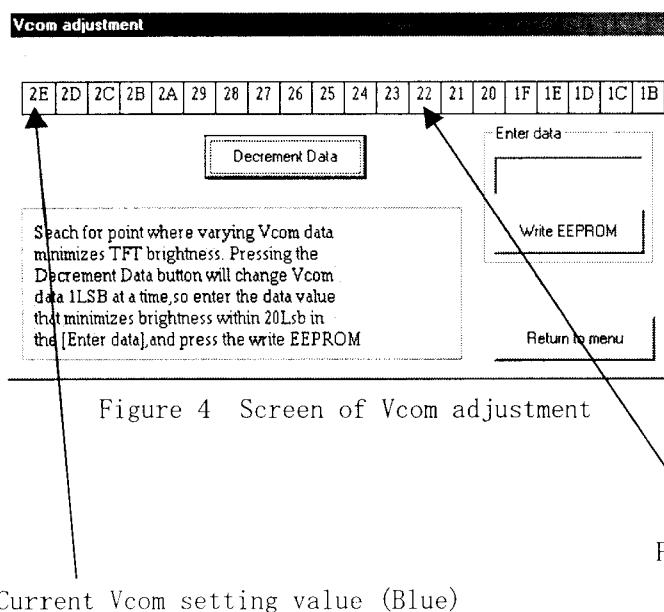


Figure 4 Screen of Vcom adjustment

(1) “Decrement Data” button

Vcom setting value is decreased by clicking this button and the brightness of the LCD panel of the camera is changed.

(2) “Data enter box” and “Write EEPROM” buttons

Input the Vcom setting value that minimizes the luminance in the Vcom setting value 20 points in data entry box. Then click the “Write EEPROM” button to write it in the camera. After that, go back to the menu automatically.

(3) “Return to menu” button

Clicking this button when the adjustment is quitted, and returns to the menu.

◇NTSC, PAL picture angle adjustment

NTSC and PAL picture angle adjustment adjusts the position of the image that is displayed on the LCD monitor.

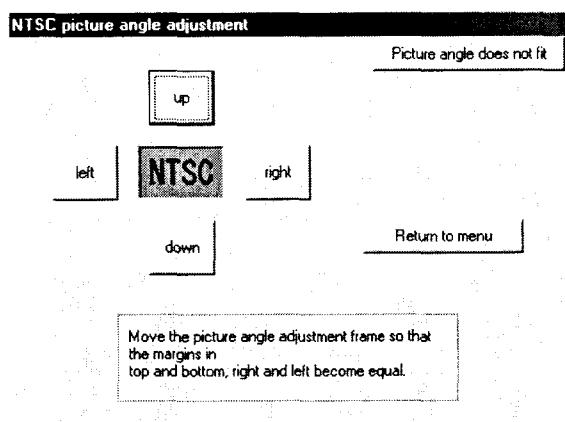


Figure 5: Screen of NTSC picture angle adjustment (PAL picture angle is the same.)

(1) [Up], [Down], [Left] and [Right] buttons

The picture angle visible frame is moved by clicking these buttons. Adjust the position so that the visible frame could be displayed in the center of the LCD of the camera.

(2) “Picture angle does not fit” button

When the picture angle cannot be adjusted, use this button. The picture angle adjustment value returns to default and the program returns to the menu automatically.

(3) “Return to menu” button

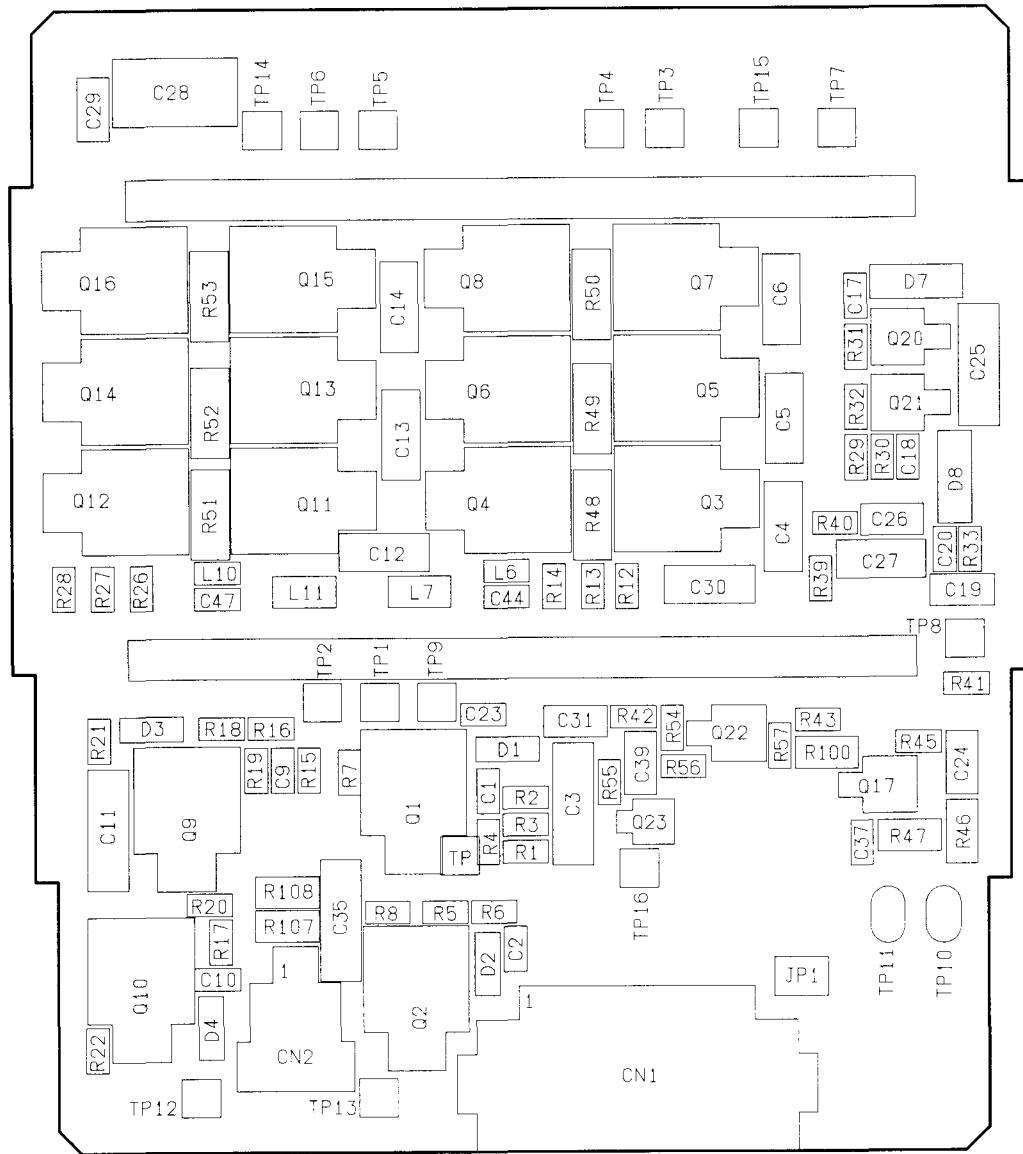
After the adjustment is completed, by clicking this button, the picture angle adjustment value is set in the camera and it goes back to the menu.

◇Flash Up

By clicking “Flash Up” button, the data of TFT_EPPROM is updated.

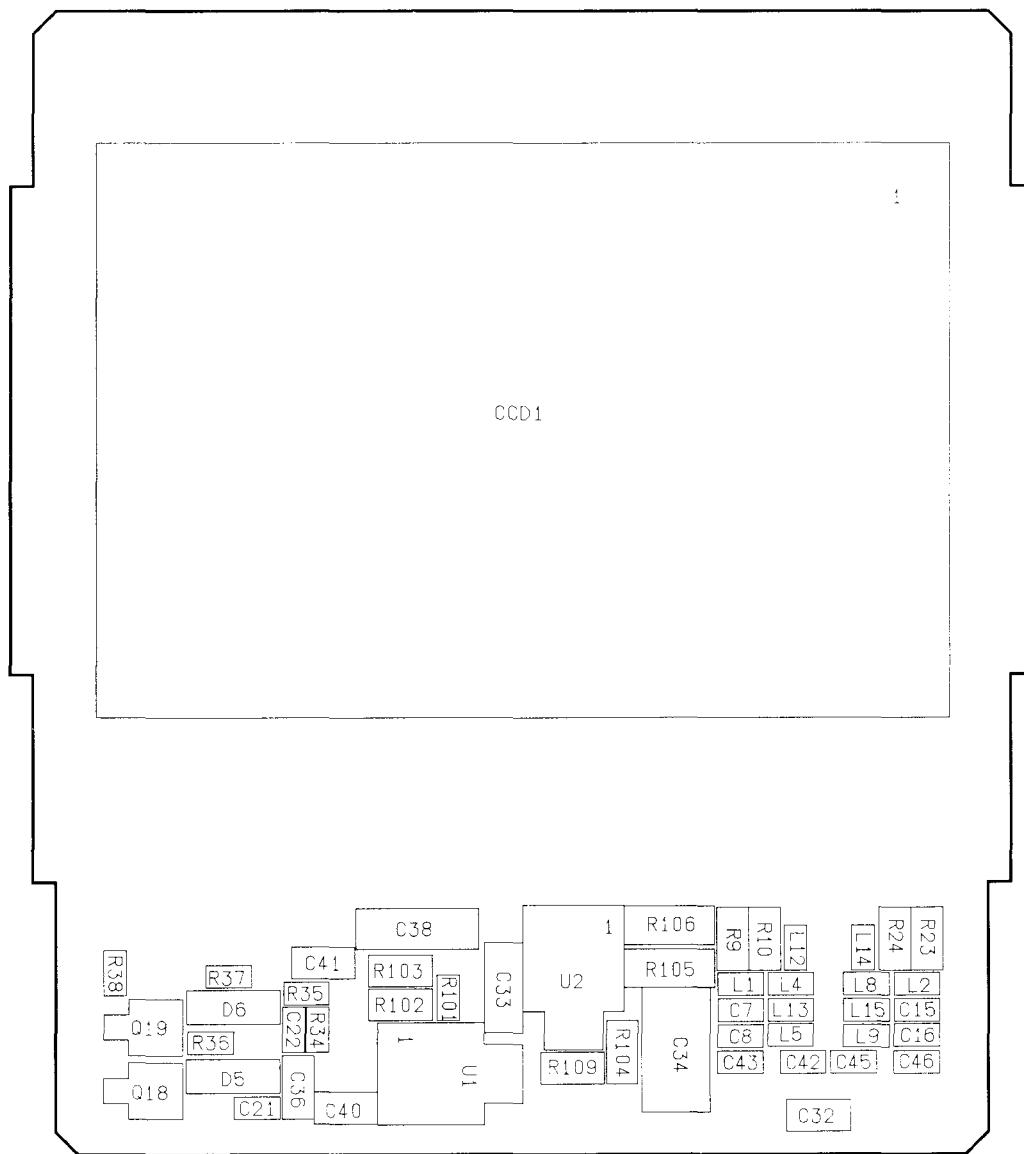
(Vcom and the picture angle adjustment are updated automatically after the adjustment is finished.)

CCD基板
CCD PCB



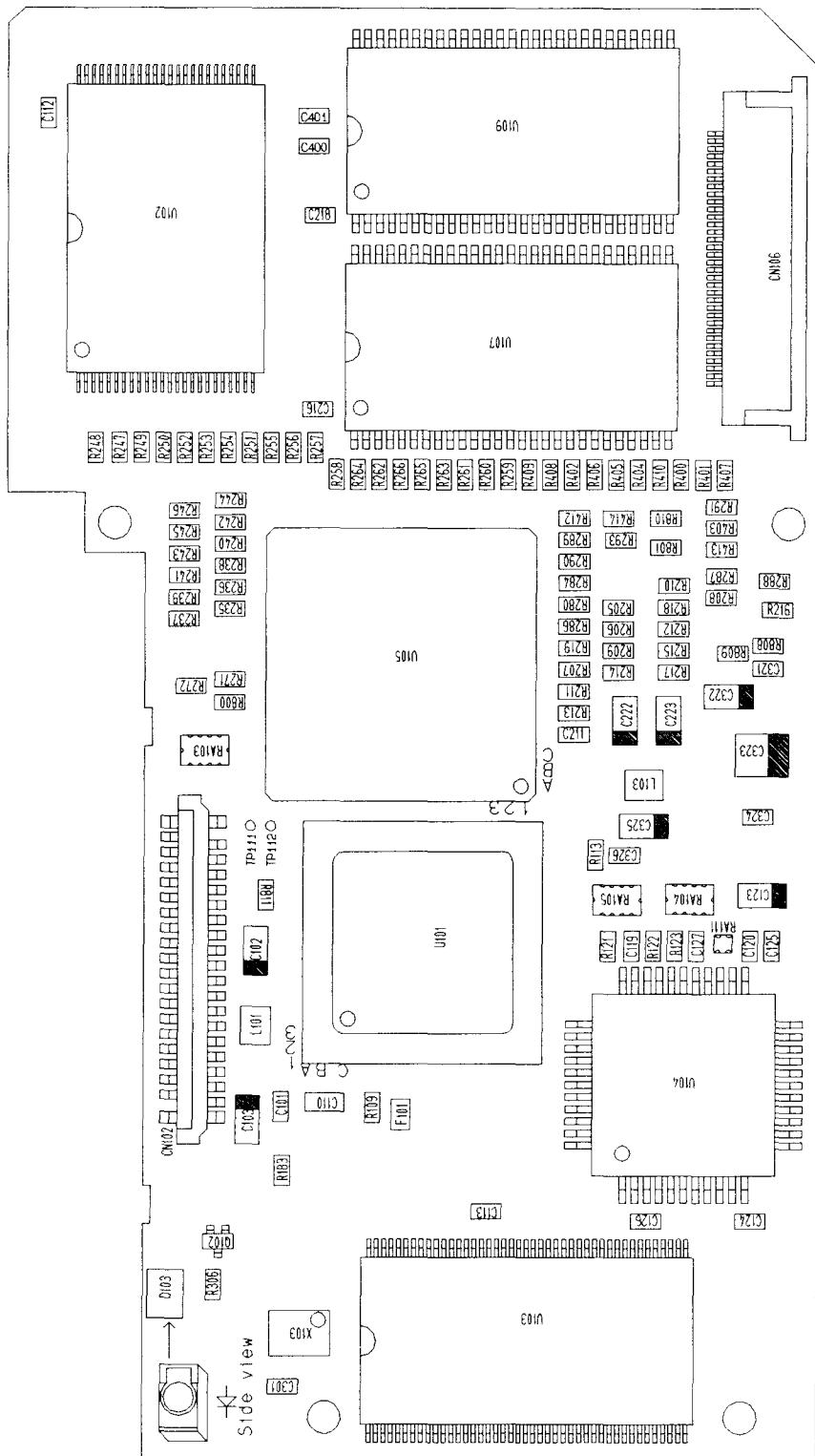
表面部品配置図
Surface part mount figure

CCD基板
CCD PCB



裏面部品配置図
Reverse part mount figure

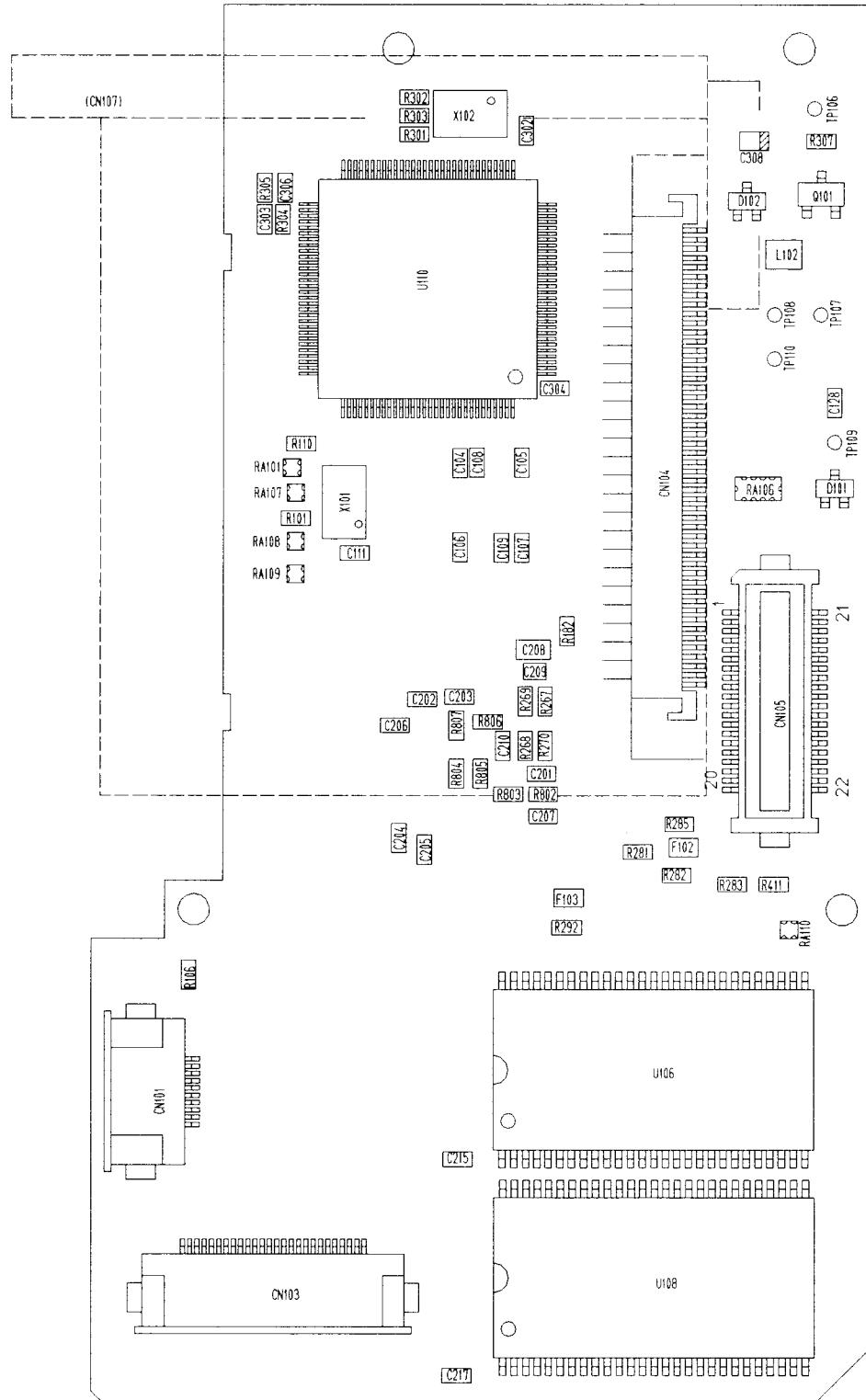
圧縮記録基板
COMPRESSION MEMORY PCB



表面部品配置図
Surface part mount figure

圧縮記録基板

COMPRESSION MEMORY PCB



裏面部品配置図
Reverse part mount figure

July 4, 2001

6. D1H EEPROM Data

ADDRESS	CONTENTS	VER. 3.11	REMARKS
0 (0000)	CAMERA CONTROL DATA	—	
		—	
210 (00D2)		—	
211 (00D3)	UNUSED	/	
		/	
511 (01FF)		/	
512 (0200)	CAMERA CONTROL DATA	—	
		—	
588 (024C)		—	
589 (024D)	UNUSED	/	
		/	
663 (0297)		/	
664 (0298)	ERROR RECORD	—	
		—	
1023 (03FF)		—	
1024 (0400)	AF ADJUSTMENT	—	
		—	
2475 (09AB)		—	
2476 (09AC)	UNUSED	/	
		/	
2815 (0AFF)		/	
2816 (0B00)	CAMERA CONTROL DATA	—	
		—	
3071 (0BFF)		—	
3072 (0C00)	CHECK SUM DATA	—	
3073 (0C01)	TTL PRE FLASH LEVEL	—	
		—	
3077 (0C05)		—	
3078 (0C06)	TTL MONITOR PRE FLASH GAMMA	—	
3079 (0C07)	CAMERA CONTROL DATA	36 (24)	
3080 (0C08)	TTL ADJUSTMENT	—	
3081 (0C09)	“	—	
3082 (0C0A)	CAMERA CONTROL DATA	0 (00)	
3083 (0C0B)	“	0 (00)	

ADDRESS	CONTENTS	VER. 3. 11	REMARKS
3084 (0C0C)	CAMERA CONTROL DATA	32 (20)	
3085 (0C0D)	"	16 (10)	
3086 (0C0E)	"	5 (05)	
3087 (0C0F)	"	48 (30)	
3088 (0C10)	"	0 (00)	
3089 (0C11)	"	216 (D8)	
3090 (0C12)	"	120 (78)	
3091 (0C13)	"	0 (00)	
3092 (0C14)	"	0 (00)	
3093 (0C15)	"	50 (32)	
3094 (0C16)	"	44 (2C)	
3095 (0C17)	"	16 (10)	
3096 (0C18)	"	5 (05)	
3097 (0C19)	"	16 (10)	
3098 (0C1A)	"	5 (05)	
3099 (0C1B)	"	1 (01)	
3100 (0C1C)	"	41 (29)	
3101 (0C1D)	"	66 (42)	
3102 (0C1E)	"	50 (32)	
3103 (0C1F)	"	18 (12)	
3104 (0C20)	"	200 (C8)	
3105 (0C21)	"	7 (07)	
3106 (0C22)	"	0 (00)	
3107 (0C23)	"	146 (92)	
3108 (0C24)	"	70 (46)	
3109 (0C25)	"	150 (96)	
3110 (0C26)	"	30 (1E)	
3111 (0C27)	"	60 (3C)	
3112 (0C28)	"	100 (64)	
3113 (0C29)	"	0 (00)	
3114 (0C2A)	"	0 (00)	
3115 (0C2B)	"	15 (0F)	
3116 (0C2C)	"	1 (01)	
3117 (0C2D)	"	80 (50)	
3118 (0C2E)	"	6 (06)	
3119 (0C2F)	"	41 (29)	
3120 (0C30)	"	0 (00)	
3121 (0C31)	"	30 (1E)	

ADDRESS	CONTENTS	VER. 3. 11	REMARKS
3122 (0C32)	CAMERA CONTROL DATA	5 (05)	
3123 (0C33)	"	10 (0A)	
3124 (0C34)	"	185 (B9)	
3125 (0C35)	TEMPERATURE DETECTION ADJUSTMENT DATA	—	
3126 (0C36)	"	—	
3127 (0C37)	"	—	
3128 (0C38)	CAMERA CONTROL DATA	0 (00)	
3129 (0C39)	"	0 (00)	
3130 (0C3A)	"	0 (00)	
3131 (0C3B)	"	0 (00)	
3132 (0C3C)	"	18 (12)	
3133 (0C3D)	"	132 (84)	
3134 (0C3E)	BC ADJUSTMENT	—	
3135 (0C3F)	"	—	
3136 (0C40)	CAMERA CONTROL DATA	28 (1C)	
3137 (0C41)	"	82 (52)	
3138 (0C42)	"	27 (1B)	
3139 (0C43)	"	38 (26)	
3140 (0C44)	"	28 (1C)	
3141 (0C45)	"	32 (20)	
3142 (0C46)	"	27 (1B)	
3143 (0C47)	"	38 (26)	
3144 (0C48)	"	236 (EC)	
3145 (0C49)	"	241 (F1)	
3146 (0C4A)	"	27 (1B)	
3147 (0C4B)	"	188 (BC)	
3148 (0C4C)	"	27 (1B)	
3149 (0C4D)	"	38 (26)	
3150 (0C4E)	"	27 (1B)	
3151 (0C4E)	"	188 (BC)	
3152 (0C50)	"	27 (1B)	
3153 (0C51)	"	38 (26)	
3154 (0C52)	"	27 (1B)	
3155 (0C53)	"	88 (58)	
3156 (0C54)	"	27 (1B)	
3157 (0C55)	"	38 (26)	
3158 (0C56)	"	1 (01)	
3159 (0C57)	"	144 (90)	

ADDRESS	CONTENTS	VER. 3. 11	REMARKS
3160 (0C58)	CAMERA CONTROL DATA	1 (01)	
3161 (0C59)	"	144 (90)	
3162 (0C5A)	"	2 (02)	
3163 (0C5B)	"	194 (C2)	
3164 (0C5C)	"	9 (09)	
3165 (0C5D)	"	196 (C4)	
3166 (0C5E)	"	9 (09)	
3167 (0C5F)	"	96 (60)	
3168 (0C60)	"	8 (08)	
3169 (0C61)	"	252 (FC)	
3170 (0C62)	"	8 (08)	
3171 (0C63)	"	152 (98)	
3172 (0C64)	"	7 (07)	
3173 (0C65)	"	20 (14)	
3174 (0C66)	"	36 (24)	
3175 (0C67)	"	24 (18)	
3176 (0C68)	"	100 (64)	
3177 (0C69)	"	40 (28)	
3178 (0C6A)	"	25 (19)	
3179 (0C6B)	"	200 (C8)	
3180 (0C6C)	"	147 (93)	
3181 (0C6D)	"	83 (53)	
3182 (0C6E)	"	15 (0F)	
3183 (0C6F)	"	200 (C8)	
3184 (0C70)	"	10 (0A)	
3185 (0C71)	"	60 (3C)	
3186 (0C72)	"	5 (05)	
3187 (0C73)	"	0 (00)	
3188 (0C74)	"	125 (7D)	
3189 (0C75)	"	50 (32)	
3190 (0C76)	AE ADJUSTMENT	—	
3191 (0C77)	"	—	
3192 (0C78)	"	—	
3193 (0C79)	CAMERA CONTROL DATA	10 (0A)	
3194 (0C7A)	"	2 (02)	
3195 (0C7B)	"	10 (0A)	
3196 (0C7C)	"	0 (00)	
3197 (0C7D)	"	34 (22)	

ADDRESS	CONTENTS	VER. 3. 11	REMARKS
3198 (0C7E)	CAMERA CONTROL DATA	100 (64)	
3199 (0C7F)	"	0 (00)	
3200 (0C80)	"	0 (00)	
3201 (0C81)	"	60 (3C)	
3202 (0C82)	"	0 (00)	
3203 (0C83)	"	16 (10)	
3204 (0C84)	"	0 (00)	
3205 (0C85)	"	2 (02)	
3206 (0C86)	"	2 (02)	
3207 (0C87)	"	50 (32)	
3208 (0C88)	"	25 (19)	
3209 (0C89)	"	200 (C8)	
3210 (0C8A)	"	248 (F8)	
3211 (0C8B)	"	2 (02)	
3212 (0C8C)	TTL ADJUSTMENT	—	
3213 (0C8D)	CAMERA CONTROL DATA	0 (00)	
3214 (0C8E)	TTL ADJUSTMENT	—	
3215 (0C8F)	"	—	
3216 (0C90)	CAMERA CONTROL DATA	27 (1B)	
3217 (0C91)	"	188 (BC)	
3218 (0C92)	"	27 (1B)	
3219 (0C93)	"	38 (26)	
3220 (0C94)	"	27 (1B)	
3221 (0C95)	"	88 (58)	
3222 (0C96)	"	27 (1B)	
3223 (0C97)	"	38 (26)	
3224 (0C98)	"	28 (1C)	
3225 (0C99)	"	32 (20)	
3226 (0C9A)	"	27 (1B)	
3227 (0C9B)	"	38 (26)	
3228 (0C9C)	"	27 (1B)	
3229 (0C9D)	"	188 (BC)	
3230 (0C9E)	"	27 (1B)	
3231 (0C9F)	"	38 (26)	
3232 (0CA0)	"	27 (1B)	
3233 (0CA1)	"	188 (BC)	
3234 (0CA2)	"	27 (1B)	
3235 (0CA3)	"	38 (26)	

ADDRESS	CONTENTS	VER. 3. 11	REMARKS
3236 (0CA4)	CAMERA CONTROL DATA	27 (1B)	
3237 (0CA5)	"	88 (58)	
3238 (0CA6)	"	27 (1B)	
3239 (0CA7)	"	38 (26)	
3240 (0CA8)	"	27 (1B)	
3241 (0CA9)	"	188 (BC)	
3242 (0CAA)	"	27 (1B)	
3243 (0CAB)	"	38 (26)	
3244 (0CAC)	"	27 (1B)	
3245 (0CAD)	"	88 (58)	
3246 (0CAE)	"	27 (1B)	
3247 (0CAF)	"	38 (26)	
3248 (0CBO)	"	30 (1E)	
3249 (0CB1)	"	30 (1E)	
3250 (0CB2)	"	30 (1E)	
3251 (0CB3)	"	30 (1E)	
3252 (0CB4)	"	30 (1E)	
3253 (0CB5)	"	0 (00)	
3254 (0CB6)	"	0 (00)	
3255 (0CB7)	"	7 (07)	
3256 (0CB8)	"	0 (00)	
3257 (0CB9)	"	36 (24)	
3258 (0CBA)	"	68 (44)	
3259 (0CBB)	"	36 (24)	
3260 (0CBC)	"	0 (00)	
3261 (0CBD)	"	0 (00)	
3262 (0CBE)	"	2 (02)	
3263 (0CBF)	"	0 (00)	
3264 (0CC0)	"	0 (00)	
3265 (0CC1)	"	0 (00)	
3266 (0CC2)	"	0 (00)	
3267 (0CC3) 3327 (0CFF)	UNUSED		
3328 (0D00)	CHECK SUM DATA	—	
3329 (0D01) 3342 (0D0E)	AF ADJUSTMENT	— —	

ADDRESS	CONTENTS	VER. 3. 11	REMARKS
3343 (0D0F)	CAMERA CONTROL DATA	39 (27)	
3344 (0D10)	"	85 (55)	
3345 (0D11)	"	25 (19)	
3346 (0D12)	"	60 (3C)	
3347 (0D13)	"	29 (1D)	
3348 (0D14)	"	30 (1E)	
3349 (0D15)	"	30 (1E)	
3350 (0D16)	"	44 (2C)	
3351 (0D17)	"	22 (16)	
3352 (0D18)	"	34 (22)	
3353 (0D19)	"	30 (1E)	
3354 (0D1A)	"	44 (2C)	
3355 (0D1B)	"	22 (16)	
3356 (0D1C)	"	34 (22)	
3357 (0D1D)	"	30 (1E)	
3358 (0D1E)	AF ADJUSTMENT	—	
		—	
3469 (0D8D)		—	
3470 (0D8E)	CAMERA CONTROL DATA	0 (00)	
		—	
3483 (0D9B)		0 (00)	
3484 (0D9C)	"	194 (C2)	
3485 (0D9D)	"	7 (07)	
3486 (0D9E)	"	5 (05)	
3487 (0D9F)	"	245 (F5)	
3488 (0DA0)	"	248 (F8)	
3489 (0DA1)	UNUSED		
3516 (0DBC)			
3517 (0DBD)	CAMERA CONTROL DATA	0 (00)	
3518 (0DBE)	UNUSED		
3521 (0DC1)			
3522 (0DC2)	CAMERA CONTROL DATA	0 (00)	
3523 (0DC3)	"	0 (00)	
3524 (0DC4)	"	0 (00)	
3525 (0DC5)	AF ADJUSTMENT	—	
3526 (0DC6)	"	—	

ADDRESS	CONTENTS	VER. 3. 11	REMARKS
3527 (0DC7)	CAMERA CONTROL DATA	154 (9A)	
3528 (0DC8)	UNUSED		
3529 (0DC9)	CAMERA CONTROL DATA	20 (14)	
3530 (0DCA)	"	4 (04)	
3531 (0DCB)	"	179 (B3)	
3532 (0DCC)	"	51 (33)	
3533 (0DCD)	"	0 (00)	
3534 (0DCE)	"	58 (3A)	
3535 (0DCF)	"	0 (00)	
3536 (0DD0)	"	40 (28)	
3537 (0DD1)	"	16 (10)	
3538 (0DD2)	"	0 (00)	
3539 (0DD3)	UNUSED	0 (00)	
3540 (0DD4)	CAMERA CONTROL DATA	122 (7A)	
3541 (0DD5)	AF ADJUSTMENT	—	
3568 (0DF0)		—	
3569 (0DF1)	CAMERA CONTROL DATA	10 (0A)	
3570 (0DF2)	"	2 (02)	
3571 (0DF3)	"	0 (00)	
3572 (0DF4)	"	6 (06)	
3573 (0DF5)	"	234 (EA)	
3574 (0DF6)	"	246 (F6)	
3575 (0DF7)	"	2 (02)	
3576 (0DF8)	"	14 (0E)	
3577 (0DF9)	"	26 (1A)	
3578 (0DFA)	"	38 (26)	
3579 (0DFB)	"	50 (32)	
3580 (0DFC)	"	62 (3E)	
3581 (0DFD)	"	74 (4A)	
3582 (0DFE)	"	246 (F6)	
3583 (0DFF)	"	2 (02)	
3584 (0E00)	"	14 (0E)	
3585 (0E01)	"	26 (1A)	
3586 (0E02)	"	38 (26)	
3587 (0E03)	"	50 (32)	
3588 (0E04)	"	70 (46)	
3589 (0E05)	"	74 (4A)	

ADDRESS	CONTENTS	VER. 3. 11	REMARKS
3590 (0E06)	CAMERA CONTROL DATA	254 (FE)	
3591 (0E07)	"	9 (09)	
3592 (0E08)	"	26 (1A)	
3593 (0E09)	"	38 (26)	
3594 (0E0A)	"	50 (32)	
3595 (0E0B)	"	62 (3E)	
3596 (0E0C)	"	74 (4A)	
3597 (0E0D)	"	58 (3A)	
3598 (0E0E)	"	5 (05)	
3599 (0E0F)	UNUSED		
3600 (0E10)	CAMERA CONTROL DATA	128 (80)	
3601 (0E11)	"	0 (00)	
3602 (0E12)	"	125 (7D)	
3603 (0E13)	"	125 (7D)	
3604 (0E14)	"	1 (01)	
3605 (0E15)	"	0 (00)	
3606 (0E16)	"	0 (00)	
3607 (0E17)	"	48 (30)	
3608 (0E18)	"	16 (10)	
3609 (0E19)	"	58 (3A)	
3610 (0E1A)	"	0 (00)	
3611 (0E1B)	"	48 (30)	
3612 (0E1C)	"	16 (10)	
3613 (0E1D)	"	58 (3A)	
3614 (0E1E)	"	0 (00)	
3615 (0E1F)	"	48 (30)	
3616 (0E20)	"	16 (10)	
3617 (0E21)	"	58 (3A)	
3618 (0E22)	"	20 (14)	
3619 (0E23)	"	23 (17)	
3620 (0E24)	"	32 (20)	
3621 (0E25)	"	51 (33)	
3622 (0E26)	"	104 (68)	
3623 (0E27)	"	64 (40)	
3624 (0E28)	"	32 (20)	
3625 (0E29)	"	25 (19)	
3626 (0E2A)	"	100 (64)	
3627 (0E2B)	"	100 (64)	

ADDRESS	CONTENTS	VER. 3.11	REMARKS
3628 (0E2C)	CAMERA CONTROL DATA	51 (33)	
3629 (0E2D)	"	4 (04)	
3630 (0E2E)	"	32 (20)	
3631 (0E2F)	"	102 (66)	
3632 (0E30)	"	36 (24)	
3633 (0E31)	"	64 (40)	
3634 (0E32)	UNUSED		
3635 (0E33)	CAMERA CONTROL DATA	38 (26)	
3636 (0E34)	"	64 (40)	
3637 (0E35)	"	13 (0D)	
3638 (0E36)	"	128 (80)	
3639 (0E37)	"	26 (1A)	
3640 (0E38)	"	205 (CD)	
3641 (0E39)	"	1 (01)	
3642 (0E3A)	"	1 (01)	
3643 (0E3B)	"	128 (80)	
3644 (0E3C)	"	20 (14)	
3645 (0E3D)	"	80 (50)	
3646 (0E3E)	"	200 (C8)	
3647 (0E3F)	"	0 (00)	
3648 (0E40)	"	12 (0C)	
3649 (0E41)	"	0 (00)	
3650 (0E42)	"	0 (00)	
3651 (0E43)	"	20 (14)	
3652 (0E44)	"	40 (28)	
3653 (0E45)	"	40 (28)	
3654 (0E46)	"	102 (66)	
3655 (0E47)	"	63 (3F)	
3656 (0E48)	"	6 (06)	
3657 (0E49)	"	55 (37)	
3658 (0E4A)	"	102 (66)	
3659 (0E4B)	"	63 (3F)	
3660 (0E4C)	"	102 (66)	
3661 (0E4D)	"	63 (3F)	
3662 (0E4E)	"	137 (89)	
3663 (0E4F)	"	53 (35)	
3664 (0E50)	"	137 (89)	
3665 (0E51)	"	53 (35)	

7. Tool

Only the new tools are mentioned here.

For the other tools, refer to Repair Manual for D1.

Tool No.	Name of tool	DESCRIPTION
J18331	ADJUSTMENT FD OF CAMARA FOR D1H	IBM 3.5 inch
J65041A	SHOOTING IMAGE ADJUSTMENT FD (JAPANESE)	IBM 3.5 inch
J65041B	SHOOTING IMAGE ADJUSTMENT FD (ENGLISH)	IBM 3.5 inch